WHAT IS CLAIMED IS:

1. A method of manufacturing a magnetic material in which a molten alloy is collided to a circumferential surface of a cooling roll to be cooled and then solidified to produce a ribbon-shaped magnetic material having an alloy composition represented by the formula of $R_x(Fe_{1-y}Co_y)_{100-x-z}B_z$ (where R is at least one rare-earth element, x is 10 - 15at%, y is 0 - 0.30, and z is 4 - 10at%), wherein the method is characterized by use of a cooling roll having gas expelling means provided in a circumferential surface of the cooling roll for expelling gas entered between the circumferential surface and a puddle of the molten alloy.

2. The method as claimed in claim 1, wherein the cooling roll includes a roll base and an outer surface layer provided on an outer peripheral portion of the roll base, and said gas expelling means is provided in the outer surface layer.

3. The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity lower than the heat conductivity of the structural material of the roll base at or around a room temperature.

4. The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a ceramics.

5. The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity equal to or less than 80W m^{-1} K^{-1} at or around a room temperature.

6. The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a coefficient of thermal expansion in the range of 3.5 - 18[$\times 10^{-6}K^{-1}$] at or around a room temperature.

7. The method as claimed in claim 2, wherein the average thickness of the outer surface layer of the cooling roll is 0.5 to 50μm.

8. The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is manufactured without experience of machining process.

9. The method as claimed in claim 1, wherein the surface roughness Ra of a portion of the circumferential surface where the gas expelling means is not provided is 0.05 - 5μm.

10. The method as claimed in claim 1, wherein the gas expelling means includes at least one groove.

11. The method as claimed in claim 10, wherein the average width of the groove is 0.5 - 90μm.

12. The method as claimed in claim 10, wherein the average depth of the groove is 0.5 - 20μm.

13. The method as claimed in claim 10, wherein the angle defined by the longitudinal direction of the groove and the rotational direction of the cooling roll is equal to or less than 30 degrees.

14. The method as claimed in claim 10, wherein the groove is formed spirally with respect to the rotation axis of the cooling roll.

15. The method as claimed in claim 10, wherein the at least one groove includes a plurality of grooves which are arranged in parallel with each other through an average pitch of 0.5 - 100μm.

16. The method as claimed in claim 10, wherein the groove has openings located at the peripheral edges of the circumferential surface.

17. The method as claimed in claim 10, wherein the ratio of the projected area of the groove or grooves with respect to the projected area of the circumferential surface is 10 - 99.5%.

18. The method as claimed in claim 1, further comprising a step of milling the ribbon shaped magnetic material.

19. A ribbon-shaped magnetic material which is manufactured by the method described in any one of claims 1 to 17.

20. The ribbon-shaped magnetic material as claimed in claim 19, wherein the average thickness thereof is 8 - 50μm.

21. A powdered magnetic material which is manufactured by the method described in claim 18.

22. The powdered magnetic material as claimed in claim 21, wherein the powdered magnetic material is subjected to at least one heat treatment during or after the manufacturing process thereof.

23. The powdered magnetic material as claimed in claim 21, wherein the mean particle size of the powder is 1 - 300μm.

24. The powdered magnetic material as claimed in claim 21, wherein the powdered magnetic material mainly has a $R_2TM_{14}B$ phase (where TM is at least one transition metal) which is a hard magnetic phase.

25. The powdered magnetic material as claimed in claim 24, the volume ratio of the $R_2TM_{14}B$ phase with respect to the whole structural composition of the powdered magnetic material is equal to or greater than 80%.

26. The powdered magnetic material as claimed in claim 24, wherein the average grain size of the $R_2TM_{14}B$ type phase is equal

to or less than 500nm.

27. A bonded magnet which is manufactured by binding the powdered magnetic material as claimed in any one of claims 22 to 26 with a binding resin.

28. The bonded magnet as claimed in claim 27, wherein the intrinsic coercive force (H_{cJ}) of the bonded magnet at a room temperature lies within the range of 320 - 1200 kA/m.

29. The bonded magnet as claimed in claim 27, wherein the maximum magnetic energy product $(BH)_{max}$ of the bonded magnet is equal to or greater than 40kJ/m^3.